HENRI DE MONDEVILLE
(CIRCA 1260–1320)

FROM NICAISE)

HENRI DE MONDEVILLE*

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Henri de Mondeville, a surgeon of the thirteenth century, was the first Frenchman to write a text of surgery. Added to this he was a staunch advocate of two ideas, which make him significant to all interested in the development of medicine and of surgery. At the turn of the thirteenth century, he was teaching that the formation of pus is avoidable and was practising in this belief; he held that suppuration is not a stage of healing but a complication. Moreover, in a period when all surgeons were regarded as artisans at best and charlatans or idiots at worst, he—an educated physician—devoted his energies to surgery and urged its fundamental position in Medicine.

That term, so much used and so badly abused in medical circles, "very little is known", is quite justly applied to the story of Mondeville's life. The year 1301 is the date in his life most firmly documented. In a "tablet de cire"[1] of that year it is found that "Henri de Amondaville" received 40-odd livres for a specified number of days' service in the Royal household. It is also recorded there that he accompanied Philip the Fair and his family on a trip into Flanders during this same year. Most of the rest of the biographical material is derived from the extant contemporary manuscripts of Mondeville's book, although infrequent references to Henri occur in other manuscripts of the same or a little later period, notably in *La Grande Chirurgie* of Guy de Chauliac.

In 1301 he was, then, surgeon to King Philip the Fair. At the same time he was conducting classes in anatomy and surgery at Montpellier. He remained at Montpellier until 1304 at least. The next date known, 1306, finds him—a member of the Academy at Paris—teaching in that city, ministering to a large practice, and sharing the duties of medical adviser to the King with two other surgeons and three physicians.

In 1312 he complains somewhat bitterly of being sent scurrying about the country on royal missions, thereby being taken away from his classes, his practice, and his book. One of these journeys car-

[1]Nicaise: *Mondeville.* p. xxiv with *note 2.*

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ried him "apud Angliam"[2], which might mean that he had been to England, but more probably referred to Arras or some other English possession on the continent.

Henri's remarks, in 1316, about his ill health and a sense of impending death are dated by his reference to the death and embalming of Philip's successor, Louis X. He prays that he will not succumb to the ravages of his diseased lungs before he finishes his surgical text.

In the latter part of his book, Mondeville speaks of having been spared three years and hopes for further surcease, a hope which was not fulfilled. This places his death around 1320. As for the other extremity of his life-span there is even more uncertainty. A miniature[3] depicting a surgeon lecturing to a group of students appears in a manuscript of 1314, a contemporary French translation of the first two treatises of Mondeville's work. This is regarded by most authorities[4] as being a portrait of Henri. As it pictures a man of about fifty, Mondeville's birth date is set at approximately 1260.

Added to this ambiguous information concerning the dates of Mondeville's birth and death is the delightful confusion about the name of the man. A dozen or more variants exist in the manuscripts:—Amondeville, Esmondeville, Mandeville, and so on. One manuscript even spells it differently in paragraphs 1 and 3. His younger contemporary and supposed pupil, Guy de Chauliac, called him Hermondaville. The predominant forms are Emondeville and Mondeville.

Since the Norman custom of the time decreed that a man's last name should be that of his birthplace[5], Henri had several alternatives. These alternatives, like those of his name, have been reduced to two[6]: Emondeville in Manche, arrondissement of Valognes, and Mondeville in Calvados, arrondissement of Caen, both in Normandy. His repeated use of Norman forms for French words further establishes his Norman origin, *e.g.*, *canole* for *chenole*[7].

Details of his early life are lacking. He is thought to have studied medicine as a clerk at Paris and at Montpellier. That he

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[2]Nicaise: *Mondeville.* p. xxv.
[3]Nicaise: *Mondeville,* frontispiece. Gerster: (Portrait).
[4]Bos: p. xix.
[5]Nicaise: *Mondeville.* p. xxiii.
[6]Nicaise: *Mondeville.* p. xxiii. Bos: p. iii.
[7]Bos: p. iii.

studied in Bologna, strengthening under Theodoric his natural bent and enthusiasm for surgery, is quite clear; for the principles of the treatment of wounds with wine-soaked, clean dressings were in large part a direct inheritance from the distinguished but short-lived line of pus abolitionists, which began with Hugh of Lucca, continued with Theodoric, and ended with Mondeville.

In continuing these teachings of Hugh and Theodoric, Henri was no rank copyist, but an independent seeker after the best principles of his predecessors. Verbose yet lucid in his writing, he exercised a caustic wit, in a most virulent manner, in his nearly solitary struggle against the prevailing views of wound treatment. One should determine one's course of action by one's own reasoning—Henri taught—and yet not discard entirely the teachings of one's masters[8].

"When using the word 'nature' he freely admits that the word is an equivocal one; but he would speak of her allegorically, as 'a lute player to whose melodies the physician has to dance'. Here he detaches himself from medieval ontology and returns to that ministry of nature which was the key to the Medicine of Hippocrates, and was renewed again in Paré's admirable, 'Je l'ai pansay, Dieu le guarit'."[9]

Mondeville's bold frankness is evident in his unscreening of the chicanery of physicians, of the ignorance of surgeons, of the superstition of the people. Not even the Church and the King escaped his lash. The unmarried Henri exercised his satirical powers to their fullest extent on the subject of women, sparing neither their reputation nor their anatomy.[10] His outspokenness on the tricks of patients to escape paying their fee, and his advice to young practitioners on how to collect their bills are so bald that Nicaise feels called upon to apologize for him, although admitting the thread of truth in his remarks even today.

To judge for ourselves concerning the merits and failures of this earliest French physician-surgeon, educated in syllogistic medicine and devoted by natural inclination to practical surgery, let us briefly examine his times, and then follow through his book.

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[8]Nicaise: *Mondeville.* p. xlvii.
[9]Allbutt: p. 42.
[10]Bos: p. iv.

The Middle Ages may be considered as that long space of time extending from the fall of the Roman Empire—so aptly called by the French, *la chute*—to the capture of Constantinople in 1453. Nicaise[11] neatly divides it into four periods: first, the period of invasions; second, the feudal period and that of the crusades. The third period, formed by the thirteenth century alone, marks the commencement of the modern era; civilization was recovering and once again progressing; one can call this period the Pre-Renaissance. The fourth period, similar to but less brilliant than the thirteenth century, leads up to the Renaissance and the Reformation.

It is with the third period, the thirteenth century, and a part of the fourteenth century, that we here have to deal; for Henri was a participant in the Pre-Renaissance. The thirteenth century brought forth Dante and St. Thomas Aquinas. It was the age of Philip Augustus and of Saint Louis, who built Sainte Chapelle and whose confessor, Robert le Sorbon, founded that group of schools of theology which came to be known by his name. This period included a part of the great struggle toward political and geographical unification under a national government, personified in the King of France. Free towns, craftsmen guilds, and the power of the bourgeoisie were gaining in importance. The rumbling of Philip the Fair's struggles with Edward I furnished a prelude to the storm of the Hundred Years' War which broke a little later on in the fourteenth century. The Babylonian captivity of the Popes at Avignon was followed by the Great Schism which set up three Popes, each simultaneously claiming divine right to the throne of St. Peter.

"In the arts Gothic architecture triumphed magnificently; one finds Sainte Chapelle, the cathedrals of Paris, Rheims, Rouen, Strasbourg, Amiens. . . . The torches of science, such as survived, had been in the hands of the clergy"[12] and had lighted only the dusty and unused corners of monasteries. "But in the 13th century lay schools multiplied, the field of studies widened"[13] and the national literature budded from the fertile seed of the troubadors.

It was the time of formal organization in the Universities. Paris has set 1200 as the arbitrary date of its founding, Oxford 1206,

[11]Nicaise: *Guy de Chauliac.* p. ix.
[12]Nicaise: *Guy de Chauliac.* p. xii.
[13]Nicaise: *Guy de Chauliac.* p. xii.

Cambridge 1229, and some nine others were founded in the same century. In the Universities one studied Theology, the Law—civil and canon—, the Arts, and Medicine, all the teaching being in Latin. The curriculum of the Arts course was composed of the trivium (grammar, rhetoric, and logic) and the quadrivium (arithmetic, geometry, music, and astronomy).

The Universities were all under the jurisdiction of the Church, which was the most powerful central authority. Prior to the establishment of the Universities with their "high-stomached" Facultés, teaching was more informal. A group of young ardents would place themselves under the tutelage of a well-known teacher to whom they paid their fees directly. The teachers naturally tended to congregate in certain of the cities, as Bologna, Montpellier, Padua, Paris, etc. Under this system—if it was a system—the students were the rulers; a representative of a group attached to a certain teacher would join with the representatives of other groups in governing the student community. (William Harvey was such a representative of the group known as the English Nation at Padua.) But with the founding of the Universities, studies were dictated by Papal bulls; "the books to read and the commentaries to study were chosen by ecclesiastical authority; teaching lost its practical character and became exclusively traditional and dogmatic. One followed blindly the philosophy of Aristotle, vulgarized by the translations of the Arabic authors who had lost his point of departure, namely, Observation. Science was no more than the art of syllogistic reasoning. This method and this philosophy constituted Scholasticism."[14] Allbutt's interpretation of the rise of the Church power is that "the people felt instinctively the radical and universal need of the age to be that the elements of the new Europe should be welded into a stable and coherent whole. This passionate idea of unity was called now the Church, now the Empire."[15]

"As of every other sphere," Allbutt goes on to say, "so this spirit of domination took possession of Medicine, and therein set up the idolatry of Galen as inexorably as that of Aristotle in the sphere of philosophy."[16] This strict adherence to fixed authorities was particularly evident in France, "where a new nation had to be forged

[14]Nicaise: *Guy de Chauliac*, p. xiii.
[15]Allbutt: p. x.
[16]Allbutt: p. x.

out of conflicting and reluctant elements, and therefore till consolidation was achieved the framework of custom had to be as rigid as steel. . . Thus in Paris, Medicine, like other energies, was far more rigidly fixed by sacerdotal, scholastic, and military convention than in Italy."[17] For Italy was not engaged as was France, in a finish fight for unification. Consequently, the greater tolerance of the Italian schools allowed a freer development of the sciences; individualism was not completely crushed as being dangerous to what Allbutt calls the "collective soul" of the middle ages. This comparative freedom, as well as the proximity to the source of supplies of the Arabic and the newly recovered Greek texts, gave the Italian Universities their superiority in that period and explains why Henri, Guy de Chauliac, Vesalius, Harvey and others went there to study, and sometimes remained to teach.

From medieval Italy, as well as from the Greece of Hippocrates, comes also the "lesson that our division of Medicine into internal medicine and surgery had its root not in nature, nor even in natural artifice, but in clerical, feudal, and humanistic conceits."[18] In Paris where the Faculté forbade that students should do anything with their hands, medicine was made impotent and surgery was degraded by this unnatural separation. "The physicians, who did not then have the aids of physiology and pathological anatomy, fell under the influence of the ruling doctrine; on the other hand, the surgeons, in contact daily with actual events, were forced to depart from the limits of the syllogism and could no longer remain in accord with the conclusions of Scholasticism."[19] For, as Henri said, "By experience without reason we make some progress, but by reason without experience we cannot get along at all."[20]

The necessity for a conventionalized body of dogma to hold the people under the sway of the Church was one reason for the removal of the more liberal surgery from the ranks of University medicine. Then, too, surgery in the Middle Ages was not an esteemed profession but rather a despicable handicraft. Another reason was the practitioners themselves.

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[17]Allbutt: p. xi.
[18]Allbutt: p. ix.
[19]Nicaise: *Guy de Chauliac*, pp. iii-iv.
[20]Allbutt: p. 39.

The most noteworthy of these were the clerical physician-surgeons, or master-surgeons. These men received their training in medicine in those free schools or Universities where medicine and surgery were not suffering from a mutually unhappy divorce. They were as highly educated in the philosophy of Aristotle and the dogma of Galen as any of the most narrow scholastic physicians of Paris, but they retained the Hippocratic unity of Medicine. They were not numerous, and were exceedingly rare in Paris, where surgery was not taught by a master-surgeon until Lanfranc[21] fled there from Milan. The schools at Bologna were especially productive of the keenest master-surgeons. It was there, as we have already noted, that Hugh of Lucca taught healing by first intention, in direct opposition to galenic principles. His work was carried on by his devoted pupil, perhaps his son, Theodoric, who in turn inculcated this startling method of therapy in Henri de Mondeville. For Henri, as does Guy de Chauliac, belongs to this clerical aristocracy of medieval surgeons.

Next in the scale come the lay-surgeons, who had joined together in the Corporation of St. Côme and St. Damien, the patrons of surgery. These men learned their surgery by apprenticeship, for they were barred from the Universities because they worked with their hands and because they did not know Latin. The Corporation of St. Côme was first chartered in the thirteenth century during the time of St. Louis, under an organization similar to that of the numerous tradesmen and craftsmen guilds. They had masters, journeymen, and apprentices, just as did the drapers' or the farriers' guild. It was a closed corporation, the number of apprentices being limited and chosen by the masters. That this body of lay-surgeons was quite reputable during the thirteenth century can be gathered from the fact that Philip the Fair was a Master, ex-officio, and that the royal surgeons—of whom Henri was one and his friend and master, Jean Pitard, another—had some word in the governing of the guild. However, later on during the fourteenth and fifteenth centuries this Corporation of St. Côme imitated more and more the outward trappings of the Faculté of Medicine. It established a College of Surgeons and began to award bachelors'

[21]Lanfranc was driven from Milan during the Guelph-Ghibelline struggles. He went first to Lyons, then to Paris in 1295. (Garrison: p. 154.)

degrees. The result of this aping was not only the arousing of the hatred and jealousy of the Faculté at the University of Paris, but it also led to the drying up of what productiveness the lay-surgeons possessed. For they followed the clerical physicians not only in the mechanics of awarding degrees, but also in disdaining manual experience and in turning over an increasing number of operations to the next grade of surgeons, the barbers.

The barbers rose to great importance somewhat later than the thirteenth century. As the surgeons of St. Côme became progressively more sterile and more exclusive, the lay-surgeons and the better class of barbers organized into Barber-surgeon guilds. It was from the ranks of these "surgeons of the short robe", as opposed to the University educated "surgeons of the long robe", that Ambroise Paré was to rise in the sixteenth century. In Paris the barbers were licensed to practise by the Corporation of St. Côme. An evidence of their incipient importance was the permission granted them in 1365 to go out at night unchallenged by the sentinels. In the thirteenth century nearly every baron, count, and bishop had his own private barber who shaved the feudal face, who pulled the ecclesiastical tooth, and who drained off gallons of medieval blood.

The last class of thirteenth century surgeons was composed of a considerable number of "irregulars", as Nicaise terms them, whose practice was quite extensive because of the ignorance and superstition not only among the people but even among the nobles. "Most of these," says Henri, "obtained the right to practise in the manner of extortioners and thieves. It is thus that all the illiterates, such as marksmen, debauchées, cheats, forgers, alchemists, courtesans, procuresses, mid-wives, old women, converted Jews, Saracens, etc., are allowed to operate." He says further: "It is astonishing and absurd that not only those just mentioned, but kings, princes, prelates, canons, curés, religious men of all kinds, dukes, nobles, bourgeoisie, all dabble in surgery, and especially in the treatment of diseases of the eyes—which is so difficult that very few surgeons are adequate and expert in these matters". He speaks frequently of the superstition of the people "which is more disposed to believe those who say they hold their science from God alone,"[22] than those who have learned their science from man, by dissection and

[22]Nicaise: *Mondeville*, pp. x-xi.

books. These charlatans or "irregulars" were also known as "strollers" and "cutters", the latter term being used by Guy de Chauliac. Qualified only by the hypothesis that they were divinely gifted, they often found it mortally important to leave the vicinity of the operating table immediately and precipitately, following an unsuccessful performance, before the relatives of their moribund patient should attempt to pay off the fee with halberds and stilettos. "Strollers" is not particularly applicable to these surgeons, for their frequent policy of expediency was "to cut and run".

The various sects of surgery are divided by Guy de Chauliac, according to the type of therapy employed, as follows: "First, those who (like Galen and himself) promoted coction and suppuration; (2) those who, after Theodoric, taught the dry management of wounds with washings of wine; (3) those who, after Lanfranc and William of Salicet, trimmed, and used mild unguents and plasters; (4) those who used charms with oil, wool, and cabbage leaves and supposed God to have deposited his Grace in 'verbis herbis et lapidibus'; and (5) women and silly folks, who sat and folded their hands under the will of God, Amen—which may remind us of one of the happy sayings of Henri that 'the vulgar divide diseases into those which have causes and those which have none'."[23]

Lanfranc, the Italian exile, was the first harbinger of enlightened Italian surgery in France. He wrote a complete text of surgery, which was finished in Paris in 1295-96. A few years later came Henri's work, which though not completed before his death, yet outranked Lanfranc's text in his more rational Treatment of Wounds.

The Surgery of Henri de Mondeville, written in Latin—the language of the Church, the courts, and the Universities—was planned to be in five parts, or Treatises. In the preface he invokes the blessings of God and the patron saints of surgery; he excuses himself for modifying the knowledge of the ancients as he intends to add some new material, learned by experience and from his masters.

The treatises were to deal respectively with Anatomy; Wounds and Ulcers; Diseases, except those of Bone; Fractures and Luxa-

[23]Allbutt: p. 146.

tions; and an Antidotary, or Materia Medica. This comprehensive prospectus was left incomplete by the intervention of death, as the last Doctrine of the third Treatise, the one on Special Diseases, and Treatise IV on Fractures and Luxations were never written.

Since Henri realized and stressed the importance of anatomy as the foundation of a surgeon's skill, this science is the initial subject considered. Interestingly enough one of the opening chapters is devoted to the *Algorisme*, or the methods of calculation by means of the Arabic numbers—not so commonplace then as now. Mondeville's conception of anatomy does not inspire the same reverential amazement as his conception of wound treatment. Yet he is unique in this respect: that he acknowledges his source, namely, Avicenna. Even so, he was not completely a slave to the learning of the ancients, for Nicaise regards his remarks on viscera as indication that he made some personal observations. These must have been limited, however; for dissection had not come into its own. In all probability, Mundinus had not yet begun his public dissections at Bologna when Mondeville was there. While cadaveric demonstrations were not available to Mondeville in his class work, he illustrated his lectures by what means he did have at his disposal, *i.e.*, full length charts depicting the various structural relations.

However distorted his conceptions were, he realized not only the importance of structural anatomy, but emphasized even more the functions of organs. He attributes great sensibility to the "white tissues"—nerves, tendons, ligaments, and aponeuroses—although realizing the lesser sensibility of tendons and ligaments. Muscular tissue was of two types, mouse and lizard. A muscle with elongated ends and a fat belly was *musculus*, from the Latin *mus;* while *lacertes*, from *lacertus* meaning lizard, was used for the long, thin muscles.[24]

His conception of the Circulation was the common one of the time: The spiritous fluid penetrated from an inter-ventricular cavity into the left ventricle, thence as "vital blood" through the arteries, which were double-walled to withstand this lively fluid. The veins were single-walled, carrying the more sluggish "nutritive blood". Along with other authors, he gives considerable im-

[24]The word *lacertes* was used by Guy de Chauliac in this sense, while Henri indicated by it the large muscles.

portance to the uvula as an organ modifying and adjusting the air entering the lungs.

His general idea of a threefold digestion, one in the stomach and cecum, a second in the liver, and a third in all the tissues—the superfluities making up the sperm—is not so fantastic from a modern standpoint, impossible as it may be in its details.

Treatise II on "Wounds and Ulcers" is by far the most important; Henri must have regarded it as such too, for it constitutes about one-half of the book. A lengthy preamble, making up almost one-third of the Treatise and divided into twenty-six so-called Notables and fifty-two Contingents,[25] is devoted to deontology and medical education. Here Mondeville sets forth his views on the relations between physicians and surgeons, surgeons and patients, etc. He narrates the ruses and impostures of charlatans, the querulousness of patients. He dares hold out that it is just to withhold services from those rich men who seek to cheat the doctor, and that it is not necessary to treat for charity those who prefer their riches to their health. Nicaise says: "A similar exposition is not to be found for a long time in the books which follow and are not to be found in any of those which precede. The author shows himself to be a well-rounded, intelligent man, independent, critical, enthusiastic, even a little passionate; and his style is lively, original and animated."[26]

The Notables deal also to some extent with pathology, but this subject is more amply considered in the Contingents where he speaks of the factors which influence the course and treatment of disease. Conditions—natural, non-natural, and contra-natural—are considered in order. He includes in these conditions those peculiarities due to the organism itself and those due to outside factors, and emphasizes the hygienic conditions necessary to health.

The remainder of Treatise II is divided into two "Doctrinae", the first of which takes up Wounds. The author begins by telling the general principles of the new treatment of wounds which he admittedly has learned in large part from Theodoric; he describes how his new method differs from that of the ancients, and indeed from the methods ordinarily employed in his day. "Wash the

[25]The 52 Contingents are included under Notable xiv.

[26]Nicaise: *Mondeville*, p. xli.

wound scrupulously from all foreign matter, use no probes, no tents—except under special circumstances; apply no oily or irritant matters; avoid the formation of pus, which is not a stage of healing, but a complication."[27] Thus does Allbutt summarize Mondeville's treatment.

The steps taken with a fresh wound were first to stop the bleeding, second, after cleaning out any foreign matter, to bring together and suture the lips of the wound. Then with compresses made of tow and soaked in wine, one paints the sutured wound and the neighboring parts. Next, compresses, squeezed nearly dry, are pressed upon the sutured wound, so as to absorb the humidity which comes out of it. One repeats several times this application and compression, then one proceeds to the dressing. Pledgets are placed one upon the other along each border of the wound. Over these as well as over the wound itself are placed two or three wine-soaked pads, so as to conserve the internal heat and to protect against the air—regarded as the cause of suppuration. Finally, upon all one puts a very large dry pledget, which holds the natural heat, and then one rolls the bandage according to the rules.

Direction for the administration of food and wine to enable the sick or injured patient to regain his strength are also given; for postoperative care to Henri did not mean starvation, as it it did to many surgeons. Stopping hemorrhages, topics to apply, bandages, sutures, complications, and more are dealt with. He goes on from this study of wounds in general to wounds in particular, *e.g.*, fractured skull, wounds of the white tissues, contusions of the chest, severed arteries and veins (he differentiated between these last, as we have seen in his description of double-walled arteries and single-walled veins). The complication of tetanus with its convulsions, probably not uncommon in the period, is mentioned.

The four chapters in the short second Doctrine of this second Treatise are devoted to ulcers, bites and stings, fistulae, and cancer ulcers. Mondeville refers, in the second of these chapters, to the Norman treatment for rabies by immersion in the sea, a custom which endured through the seventeenth century.

Of the three Doctrines intended to compose Treatise III, the last one on Special Surgery was never written. The first Doctrine

[27]Allbutt: p. 40.

is a miscellany; it speaks of many things, almost literally, "Of shoes—and ships—and sealing-wax—of cabbages—and kings." Bos considers these "doctrinae decorations" to be as interesting as they are unscientific, and attributes the writing of them to the avarice which on occasion has disfigured from all times the best of professions, not excepting surgery. "But what shall we say of a professor of Paris, of a surgeon of the King, who gives out receipts for rouge, depilatories, capillary dyes [tattoo?], pomades, etc., to mend the irreparable damage of years? That is not all, this worthy professor even gives out many means of simulating an absent virginity; pulverized glass, astringents, sang-dragon, the fish-bladder full of blood, nothing is lacking."[28] Yet this same professor was able to say so nobly: "You, then Surgeons, if you have operated in the homes of the rich for an adequate sum, and in the homes of the poor for charity, you should fear neither fire, nor rain, nor wind; you have no need of going into religious places nor of making penitential pilgrimages, because by your science you are able to save your souls, to live not in poverty, and to die in your own homes, to live in peace and in joy, and to exult because your recompense is grand in Paradise."[29]

The care of the body and its parts is particularly stressed, as when "sweating houses", comparable possibly to the baths of Pompeii, are described. The descriptions of skin affections here—herpes, leprosy, impetigo, burns—indicate possibly an inkling of appreciation for cause and effect.

The Doctrine ends with a study of "Incisiones", giving mainly some generalities on operations. There is a chapter on amputations, and casual mention is made of the furrier's knot for tying a ligature. According to Nicaise,[30] this disposes of the exploded legend that Paré was the first to use the ligature in amputation, for it had come down in the traditions of Italian surgery from ancient times. While Mondeville did use the actual cautery, he more often employed "styptics, digital compression, acupressure, torsion", as well as the ligature for methods of hemostasis.[31]

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[28]Bos: p. vii with *note* 1, which refers to Pagel, p. 398; and to Nicaise, p. 582 (depilatories). Bos: p. viii with *note* 1, which refers to Pagel, p. 402 (fish-bladders).

[29]Nicaise: *Mondeville*, p. xxviii.

[30]Nicaise: *Mondeville*, p. xliv.

[31]Harvey: p. 36.

Apostemes furnish the subject of the second Doctrine of Treatise III. He begins with a chapter on the generation of humors—an exposition, clear and precise, which is valuable as a means of understanding the theories of the time. Aposteme, presumably, meant a lesion, for it connotes more than its original definition, abscess. After setting forth a few underlying principles concerning lesions, Henri states that there is no typical lesion, but only particular ones. Then he proceeds to explain the constituents of the different special apostemes in the light of his humoral physiology. For example, that aposteme formed of a combination of all the natural humors—blood, bile, phlegm, and melancholy—constituted a carbuncle; that made of phlegm alone constituted edema, etc.

He speaks of "apostemes of emunctories", an emunctory apparently being a gland receiving the superfluities of an organ. That group of emunctory glands—lymph nodes, perhaps we should call them—under the ear behind the angle of the jaw, he regarded as the excretory mechanism of the brain; likewise the group in the axilla drained the heart, and the inguinal glands the liver. He advised removal of only those glands which were affected; for he apparently regarded these so-called emunctories as serving a definitely valuable function.

Materia medica was such an extensive subject, and such an important one, in the Middle Ages that Henri was prevailed upon by the importunings of his pupils to pass over orthopedic Treatise IV in favor of the Antidotary of Treatise V. These requests illustrate Henri's reputation for lucid presentation of an infinitely confused subject. This treatise is now of interest to those especially devoted to the history of botany and pharmacology, since it serves as an excellent glossary for the botanical terms used in thirteenth century materia medica.

Henri's most quoted quip occurs in the introduction to this fifth Treatise: "God did not exhaust his creative power in making Galen."[32] He reiterates his desire that there be more individual initiative in that rigidly conventional age by saying, "It would be an absurdity and almost an heresy to believe that God had accorded to Galen a sublime genius, on the condition that no mortal after

[32]Harvey: p. 36; Allbutt: p. 38;Homans: p. 61; Garrison: p. 156.

him should discover anything new. . . Has not God given to each of us, as to Galen, a natural genius? Miserable would be our spirit if we could know only that which had been discovered before us!"[33]

In tracing the influence of the Surgery of Henri de Mondeville, we find that it suffered a comparatively abortive career. In contrast to *La Grande Chirurgie* of Guy de Chauliac, written some fifty years later (1363), and going through many editions[34] even into the seventeenth century, Mondeville's work was never printed until 1889, when Pagel, in a moment of retroactive remorse as well as of historical insight, published a transliteration of the Berlin Latin manuscript.

Reasons for this neglect are not lacking. In the first place the work is unfinished, because of Mondeville's cumulative deterioration and death from phthisis, whether asthmatic or tuberculous is not known. In that day of high-priced books and actual paucity of texts, there naturally would be a preference for a completed work, such as was available in Lanfranc's Surgery, even though Mondeville's chapters on wounds were superior to anything in the Middle Ages.

Second, Mondeville's energetic defense of surgeons and surgery could not have pleased the Faculté at Paris or elsewhere; for the physician—trained in dialectic if not in experiment—was very much in the ascendent. Even Mondeville, bold as he was, expresses some trepidation over the attitude of the Faculté toward his teachings.

Third, the Universities of this period were governed largely by ecclesiastical authority. The disfavor with which advocates of centralized spiritual and temporal power must have regarded the outspoken satires of Henry is only too obvious. When Henri's work, as well as that of Lanfranc, was superseded by Guy's *Great Surgery*, smug smiles of contented dogmatism must have settled permanently on the faces of the Papal cohorts; for straight-laced Guy used better Latin, his was the latest edition, he did not seek to arouse individualism and urge men to depart from the teachings of their fathers.

Fourth, surgeons themselves did not know Mondeville's work; as, for the most part, they were barred—both by their own ignorance and by the rules of the Universities—even from the opportunity of

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[33]Nicaise: *Mondeville*, pp. xlvii-xlviii.

[34]*La Grande Chirurgie* went through 69 editions, in 7 languages (39 French, 15 Latin, 5 Italian, 2 Catalan, 4 Dutch, 3 Spanish, 1 English).

seeing it. Guy was almost the only exception to this; and he omitted mention of those very parts that gave to it its greatest value, namely, the treatment of wounds; for conservative Guy followed the galenic principles of coction and suppuration.

On the other hand, though only nineteen manuscripts bearing Mondeville's name come down from the early 1300's, yet occasional instances of his influence may be seen, indicating perhaps that Mondeville's pupils distributed his doctrines, even though the authorities held them in disfavor. An unprinted manuscript, written in English in 1392, and dealing with anatomy and surgery, is a striking example of this. Though the unnamed English author of this work could not have been a personal pupil of Henri, yet he quotes him extensively, and Lanfranc to a lesser degree; and Henri's unique arrangement of the sections on anatomy is followed exactly. "We must conclude, then, that the debt of our [English] author to Mondeville is very great, greater even than is accounted for by the numerous passages in which he quotes him by name."[35] Strangely enough, some 200 years later, in 1577, an abridged and amended copy of this English manuscript was printed over the name of one of D'Arcy Power's protégés, Sir Thomas Vicary, Sergeant-surgeon to King Henry VIII. In such delightfully meandering routes does accumulated knowledge of our predecessors percolate down to us.

J. F. Payne, who brought the above facts together in 1896, also found in the same manuscript volume of the British Museum an actual fragmentary English translation of Mondeville's work itself.

Most of Mondeville's surviving manuscripts are in the Bibliothèque Nationale, although there is a Dutch translation in the British Museum, a Provençal translation in Florence, a Latin one at Erfurt, and another at Berlin.[36] Only four of the manuscripts are complete, in so far as the book itself was complete, and all these are in Paris.

Besides the numerous mentions of Hermondaville made by Guy de Chauliac in his hardy perennial, the earliest occurrence (as far as I know) of Henri's name in this era of the printing press is in

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[35]Payne: *Reprint.*

[36]A MS. of the year 1478 is noted by Garrison (p. 156, *note* 1) as being in the University Library at Upsala.

Naudé's book on the ancient and honorable members of the Paris medical faculty, dated 1628. Eloy (1778) has a short article—listed under Henri de Hermondaville—which he devotes mainly to chiding the "*Recherches sur l'origine de la Chirurgie en France*" for appropriating for Surgery too many "medicins", including Henri. Chereau in the *Mémoires de la Societé des Antiquaires de Normandie* for the year 1862 brought out the first adequate consideration of Mondeville, though he apparently slipped up on some points, as he did not have recourse to all the manuscripts. As late as 1886, Haeser remarked (in his *Lehrbuch der Geschichte der Medizin*) that there were no extant manuscripts, and he was rather too severe in his estimation of Henri.

Littré in the *Histoire litteraire de France* in 1881 pushed the candidacy of Mondeville for a niche in the Medical Hall of Fame, referring to Henri's book thus: "This monument of French surgery deserves to have its rightful place among those of the predecessors of Guy de Chauliac."

But it was Pagel at Berlin, who had Mondeville's work printed for the first time—nearly 600 years after its appearance. In 1889, *Die Anatomie des Heinrich von Mondeville* appeared in print, this being the transliteration of the first two Treatises from one of the incomplete, earlier Latin manuscripts.

Almost the same year Nicaise of Paris produced his beautifully bound edition of Guy de Chauliac. Then unknown to one another[37] Pagel and Nicaise worked on a complete edition of all the known manuscripts of Mondeville. Pagel's Latin edition of the complete text appeared in book form in 1892, while Nicaise's French translation came out in the following year. Nicaise took the disappointment of lost priority in a sportsmanlike manner. He speaks of the international good-will created by a free exchange of manuscripts from the great national libraries, and he is ungrudging of Pagel's access to the Bibliothèque Nationale. He confesses sadly to finding no more than the eighteen manuscripts, also available to Pagel. Following Pagel and Nicaise came a host of Inaugural Dissertations at the University of Berlin, translating various parts of Mondeville's work into German.

[37]Fulton, J. F.: verbal communication.

To add to the sorrow of Nicaise, a nineteenth manuscript was found at Florence soon after the publication of his translation.[38] This manuscript is in the Provençal dialect, bearing earmarks of being from the region around Montpellier. It is a short résumé of Mondeville's course as he gave it at Montpellier in 1304.

Mention of this Florence manuscript occurs only (as far as I know) in the philological study of Bos[38] published in 1897. Bos' contribution to the story of Mondeville is only incidental to his own object. He has edited the contemporary (1314) French translation of Mondeville's work (MS. No. 2030 Bibl. Nat.) primarily as a study in the early French language. "This translation is the first essay in scientific French and contains a great many terms which were supposed to have originated in the fifteenth century and which have continued in current use."[39] In the thirteenth century scientific French was in as poor a state as French science. The translator must have struggled to find French equivalents for the Latin terms. The French words he uses to translate "vulva, virga, anus, etc,." are so grossly vulgar, or at any rate have become so now, that they are not to be found in the ordinary dictionary. Bos speculatively considers the translator to have been a young Norman medical student—not too well versed in medicine or in Latin—who translated the work either to gain recognition, to exercise himself in Latin and in French, or to be useful to the lay surgeons, who knew even less Latin than he.

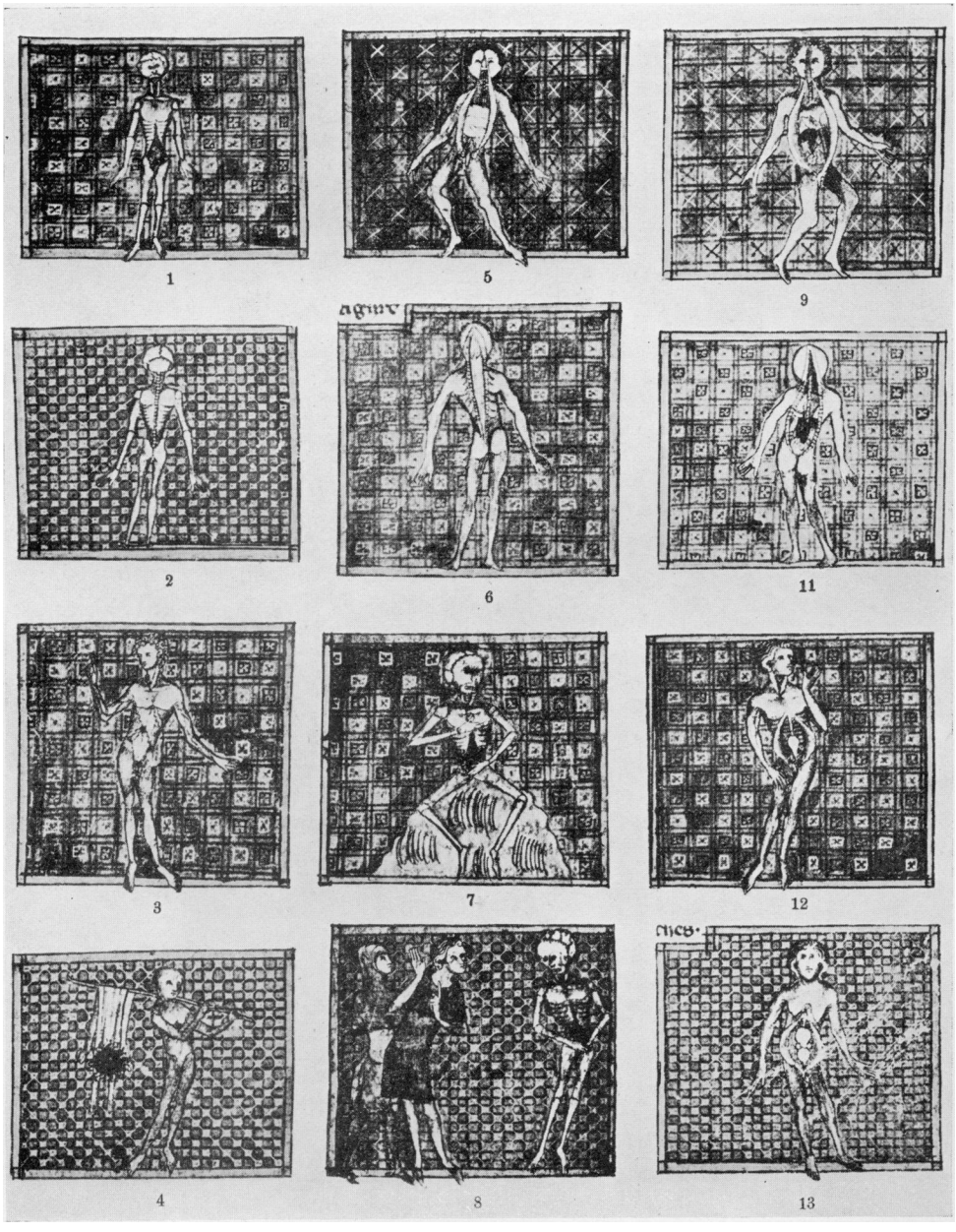
This French manuscript is remarkable in yet another way. It contains the often mentioned, but never printed anatomical miniatures, copied from the life-size figures used by Mondeville. Practically all the authorities on Mondeville had tossed these miniatures aside with a snort. Malgaigne,[40] for instance, says, "I find fourteen colored figures in the French manuscript but so insignificant are they, that it is not worth while to speak of them." Bos also considers them too small and too grossly done to give the slightest anatomical detail; and since "they presented neither a scientific nor an artistic interest",[41] he dispensed with reproducing them. Pagel and Nicaise waste few words on them, although Nicaise does re-

[38]Bos: pp. xi-xii, with *note* 1 on p. xii.

[39]Bos: p. xliii.

[40]Malgaigne: pp. li-lii.

[41]Bos: p. xxx.



CONTEMPORARY MINIATURES DRAWN FROM CHARTS USED BY MONDEVILLE IN TEACHING ANATOMY
(FROM SUDHOFF: PLATE XXIV)

produce one of the miniatures and the frontispiece, which is supposed by all except Bos to depict Mondeville himself lecturing to a class. In Choulant's bibliographical study of anatomical illustration, appearing in 1858, there is mention, but little more, of Henri's figures. However, Mortimer Frank's translation of Choulant's book, together with his own copious additions, taken in large part from Sudhoff's studies, brings out the real value and historical significance of these miniatures.

"With the beginning of the fourteenth century, the anatomic series of entire figures of the post-antique period experienced several transformations. The first by Henri de Mondeville who had made entirely new, full length, anatomic pictures. . . This graphic independence of Mondeville is amazing. . . Judging from de Mondeville's descriptions of his drawings, they offered plenty of detail which the artist was unable to represent in the small space that was allowed him. . . . Only one figure, the figure of seated Death, shows the squatting position with the knees spread apart; all the others are free from this constrained posture of centuries and present an easy pose. . . The representations of the skeleton pictures follow the medieval drawings of Death for symbolic and emblematic purposes, as they were also later used in the Dance of Death. . . . The Mondeville pictures of the osseous system show the bodies with dried up soft parts (lemures). . . . In later centuries, this characteristic lemur feature is again shown in the skeleton pictures. No remarkable progress in the osseous pictures by de Mondeville is therefore noticeable, except in the elimination of constraint in posture.

"Entirely free from tradition is his muscle manikin carrying his skin on a stick over his shoulder, which does not show any copyist tendencies, but is already fully representative of the type of later artistic anatomy; *i.e.*, exposure of the superficial muscles by removal of the skin, de Mondeville has priority in this picture. . .

"An entirely original drawing is the body dissected from the back to show the viscera from this position. In the composition of the postures of his figures, de Mondeville seems not to have been without influence on posterity. . . Sudhoff assumes that perhaps de Mondeville's pictures influenced Vesalius to a large degree. . . De Mondeville's drawings must be regarded as an original accomplishment and his illustrative achievements as very remarkable."[42]

[42]Frank: p. 58.

The only English articles devoted exclusively to Mondeville are those of Cumston of 1902-3, in which he comments on and translates parts of Mondeville's book; and Gerster's very charming account in the Proceedings of the Charaka Club of 1910. Pilcher compared both Guy and Henri in a short article in the Annals of Surgery of 1895. However, the most delightful of all is Allbutt's interpretation appearing in the course of his *Historical Relations of Medicine and Surgery.*

So we leave Henri, a bold, independent soul who was so completely of his time and so brilliantly beyond his time. A Garrisonian perspective of the whole of medical history might allow Mondeville an honorable mention in a paragraph or so for being the first French author of a surgery and for following out the wound treatment of Hugh and Theodoric. But I prefer Allbutt's enthusiastic remark: "Haeser seems to me to do less than justice to this hardy and original reformer, the last champion in his day of two causes—the solidiarity of Medicine and union by first intention; the second of these causes was lost for 600 years, the first is not fully won even yet."[43]

[43]Allbutt: p. 37.

BIBLIOGRAPHY*

Allbutt, T. C.: The Historical Relations of Medicine and Surgery, to the End of the 16th Century. Macmillan, N. Y. & London. 1905. xvi+125 pp. 12°.

Bos, A.: La chirurgie de maître Henri de Mondeville; traduction contemporaine de l'auteur, publiée d'après le ms. unique de la Bibliothèque nationale. Fermin Didot & Cie., 1897-98, Paris. 2 vol., xlviii+287 pp. 340 pp. 8°. Publication de la Société des anciens texts français.

Chereau, A.: Henri de Mondeville, chirugien de Phillippe le Bel, roi de France. Paris, 1862. 8°. *Also;* Mém. de la Soc. des antiquaires de Normandie. 1862. vol. xxv.

Choulant, L.: Graphische Incunabeln fur Naturgeschichte und Medizin. R. Weigel, Leipzig, 1858. 125 pp. *Also*; München, Verlag der Münchener drucke, 1924.

Corlieu, A.: Les manuscrits d'Henri de Mondeville. Bull. Acad. de méd., 1889, Sept. 24. *Also;* France méd., 1889, Sept. 26, 1332.

*My indebtedness to the authors referred to in the foot-notes, especially Nicaise, is only too manifest. This bibliography, besides including the authors mentioned in the article, is in the nature of an addendum to those of Pagel and Nicaise, and is compiled in an endeavor to complete the list of titles from 1890 to the present.

Cumston, C. G.: Henry de Mondeville, the man and his writings; with translations of several chapters of his works. Buffalo Med. J., 1902-3, n s., *42*; 486; 549; 642. *Also*; Reprints.

Diestel-Lämmer, W.: Schusswundenbehandlung nach Heinrich von Mondeville. Berlin, 1896. Inaug. dissert. Berlin.

Eloy, N. F. J.: Dictionnaire historique de la médicine ancienne et moderne. Ou, Mémoires disposés en ordre alphabétique pour servir à l'histoire de cette science, et à celle des médicins, anatomistes, botanistes, chirurgiens et chymistes de toutes nations. H. Hoyois, Mons, 1778, 4 vol. 1 front., 25x24 cm.

Frank, M.: Ludwig Choulant's History and Bibliography of Anatomic Illustration. Translated and edited (with additions) by Mortimer Frank, with additional notes by E. C. Streeter and F. H. Garrison. Univ. of Chicago Press, Chicago, 1920.

Garrison, F. H.: An Introduction to the History of Medicine, with Medical Chronology, Suggestions for Study and Bibliographic Data. Saunders & Co., Phila. & London, 4th ed., rev. and enlarged. 1929.

Gerster, A. G.: Henri de Mondeville. Proc. Charaka Club, N. Y., 1910, *3* 70-98, portrait. W. Wood & Co.

Haeser, H.: Lehrbuch der Geschichte der Medizin und der epidemischen Krankheiten. H. Dufft, G. Fischer. Jena. 1875-1882. 3 vol.

Harvey, S. C.: The History of Hemostasis. P. B. Hoeber, Inc., N. Y., 1929. 19 illust. Reprinted with additions and corrections from: Ann. Med. Hist., n. s., 1929, *1*, 127-54.

Herda, W.: Die Anatomie des Heinrich von Mondeville (14 Jahrh.); zum ersten Male ins Deutsche übertragen und mit Anmerkungen versehen. Berlin, 1898, 8°.

Hering, F.: Kosmetik nach Heinrich von Mondeville. . . Berlin, 1898. 8°. Inaug. dissert. Berlin.

Homans, J.: A Textbook of Surgery. C. C. Thomas, Springfield (Ill.) & Baltimore. 1931.

Kaufman, J.: Ueber Incisionem nach Heinrich von Mondeville. Berlin, 1897. 8°.

Kleinhaus, H.: Die allgemeinen Principien der Wundbehandlung nach Heinrich von Mondeville. Berlin, 1895. Inaug. dissert. Berlin.

Lesshaft, H.: Die Behandlung der Kopfwunden nach Heinrich von Mondeville. Magdeburg, 1895. Inaug. dissert. Berlin.

Littré, E.: Henri de Mondville, un des chirurgiens du roi Phillippe le Bel. Histoire litteraire de France. Vol. 28, 325-52. Imprimerie nationale. . . 1733-1921. 35 vol. Title and imprint vary.

Luedecke, E. G.: Wundverband und Wundnaht nach Heinrich von Mondeville. Berlin, 1898. 8°. Inaug. dissert. Berlin.

Malgaigne, J. F.: Oeuvres complètes d'Ambroise Paré. Paris, J. B. Bailliere. 1840-41. Vol. 1, Introd. pp. l-liii.

Mollière, H: La chirurgie et les chirurgiens français au commencement du XIV siècle, d'àpres le livre d'Henri de Mondeville. Lyon Méd., 1894, *76*, 1161-71.

Naudé, G.: De antiquitate et dignitate scholae medicae Parisiensis panegyris. Paris, Lutet, 1628. 12°. pp. 41 and 76.

Neuberger, M.: History of Medicine. Translated by Ernest Playfair. Humphrey Milford, Oxford Univ. Press. 1925. vol. II, Part I. pp. 89-90; 91; 121-123.

Neuhaus, M.: Ueber Abscesse nach Heinrich von Mondeville. Berlin, 1897. Inaug. dissert. Berlin.

Nicaise, E.: La Grande Chirurgie de Guy de Chauliac, composée en l'an 1363. Revue et collationée sur les manuscrits et imprimes latins et français. Ornée de gravures, avec des notes, une introduction sur le moyen age, sur la vie et les œuvres de Guy de Chauliac, un glossaire et une table alphabétique. Paris, 1890. Felix Alcan, Editeur.

Nicaise, E.: La Chirurgie de maître Henri de Mondeville, chirurgien de Phillippe le Bel, roi de France; composée de 1306 à 1320. Traduction française avec notes, une introduction et une biographie. Par E. Nicaise, avec la collaboration du Dr. Saint-Lager et de F. Chavannes. Paris, Ancienne Libraire Germer, Bailliere et Cie. F. Alcan, éditeur. 1893, Publieé sous les auspices du Ministère de l'Instruction publique.

Niendorf, E.: Zur Lehre von den Fisteln nach Heinrich von Mondeville. Berlin, 1896. Inaug. dissert. Berlin.

Pagel, J. F.: Die Anatomie des Heinrich von Mondeville. Nach einer Handschrift der königlichen Bibliotek zu Berlin vom Jahre 1304, zum ersten Male herausgegeben. G. Reimer, Berlin, 1889. 8°.

Pagel, J. F.: Die Chirurgie des Heinrich von Mondeville (Hermondaville) nach dem Berliner und drei Pariser Codices zum ersten Male herausgegeben. von Langenbeck's Archiv fur klin Chir., 1890, *40*, 253; 653; 869: 1891, *41*, 122; 467; 705; 917: 1891, *42*, 172; 426; 645; 895.

Pagel, J. F.: Noch einmal 'die Chirurgie des Heinrich von Mondeville'. Vorlaufige Mittheilung. von Langenbeck's Archiv fur klin. Chir., 1892, *44*, 227-32.

Pagel, J. F.: Wundbehandlung im Altertum und Mittelalter. Deutsche med.-Zeitung, 1891, pp. 1036-40.

Pagel, J. F.: Leben, Lehre und Leistungen des Heinrich von Mondeville (Hermondeville). Ein Beiträge zur Geschichte der Anatomie und Chirurgie. Theil I. Enthaltend den Text der Chirurgie des H. von Mondeville nach Berliner, Erfurter und Pariser Codices, Vorrede und Einleitung, nebst Indices und einigen biographisch-literarischen Nachträgen, sowie einer Abhandlung über die Synonyma und einem Glossar vom M. Steinschneider. A Hirschwald. Berlin, 1892.

Pagel, J. F.: Die chirurgische Hodegetik und Propädeutik des Heinrich von Mondeville (Hermondaville). Deutsche med.-Zeitung, 1892, pp. 156, 166, 178, 189.

Pagel, J. F.: Analekten zur Chirurgie des Heinrich von Mondeville. Janus, Amsterdam, 1909, *14*, 399-404.

Pankow, A. L. W.: Die Anatomie des Heinrich von Mondeville (14 Jahrh.) Zum ersten Male ins Deutsche übertragen und mit Anmerkungen versehen. Berlin, 1898. 8°.

Payne, J. F.: On an unpublished anatomical treatise of the 14th century and its relation to the "Anatomy" of Thomas Vicary. Brit. Med. J., 1896, *i*, 200-3. *Also;* Reprint.

Pilcher, J. E.: Guy de Chauliac and Henri de Mondeville; a surgical retrospect. Ann. Surg., Phil., 1895, *21*, 84-102. *Also;* Reprint.

Rausbach, A.: Ueber die Wundtränke in der mittelalterlichen Chirurgie, mit besonderer Berucksichtigung Mondeville's. Berlin, 1898. 8°. Inaug. dissert. Berlin.

Rawitzki, N.: Ueber accidentelle Wundkrankheiten nach Heinrich von Mondeville. Berlin, 1897, 8°. Inaug. dissert. Berlin.

Ruppin, W.: Aus dem Antidotarium des Heinrich von Mondeville (14 Jahrh.). Berlin, 1898. 8°. Inaug. dissert. Berlin.

Sudhoff, K.: Anatomie im Mittelalter. Stud. z. Gesch. d. Med., Leipzig, 1908, Heft 4, pp. 82-89, pl. xxiv.

Töply, R.: [Critical review of Pagel's Die Anatomie des H. von Mondeville, 1899.] Wein. klin. Wchnschr., 1889, *50*, 967.

Wachsmuth, E.: Aus Mondeville's chirurgischer Deontologie (Anfang des 14 Jahrh.). Berlin, 1898, 8°.

Wagner, Th.: Die Lehre von den Geschwüren nach Heinrich von Mondeville. Berlin, 1896. Inaug. dissert. Berlin.

Weber, C.: Spezielle Wundbehandlung des Heinrich von Mondeville. Berlin, 1896. Inaug. dissert. Berlin.

Zimmerman, W.: Die Lehre von der Kauterisation nach Heinrich von Mondeville. Berlin, 1897. 8°.